



Scientific Tracks & Abstracts



Joint event on

World Congress on **Breast Cancer**
&
5th International Conference on
Vascular Biology & Surgeons Meeting

February 25-26, 2019 London, UK

Calmodulin antagonists as potential therapeutic agents for cancer treatment “Breast Cancer”

Falah AM Salih

Biotechnology Research Institute, Malaysia

Although cancer research undergone a rapid expansion, there is no potential cure and the disease remains one of the leading causes of mortality worldwide. Breast cancer continue as the most female malignancy and a major cause of death in middle-aged women. With that, urgent novel potential therapeutic agents are required. Calmodulin regulates many biological processes. Calmodulin antagonists have been reported to induce apoptosis and inhibit tumour cell growth. However, the potential effects of these target agents on various cancer within the molecular levels are poorly understood. In this presentation, we aimed to provide a global view on the latest molecular understanding of cancer development and treatment with special emphasis on breast cancer. In addition, successful preliminary trial was made to find a novel target for breast cancer treatment. Methods: Human breast cancer cell lines; ER-positive; MCF-7, T47D, and ER-negative MDAMB-231 were incubated and grown with calmodulin antagonists; Tamoxifen, W-7, W5, Trifluoperazine and Phenothiazine. The proliferative and cytotoxicity ability was analysed via WST-8 assay on both ER-positive and ER-negative cell lines. The minimum inhibitory concentration was estimated using GraphPad Prism 7. Moreover, Apoptosis was preliminary examine by using DNA fragmentation technique. Gene expression of BRCA1 gene in cell lines were analysed by real-time PCR. Findings: Calmodulin antagonists effectively reduced cell growth of both ER-positive and ER-negative human breast cancer cell lines. The minimum inhibitory concentration, IC₅₀ values of CaM antagonists were between the ranges of 10 to 50 μM. There was reduction in calmodulin levels estimated from the samples in comparative to control cells. Rate of gene expressions from target cells were reduced by the addition of the antagonists. DNA fragmentation analysis shows that treatment via CaM antagonists induced apoptosis of programmed cell death in breast cancer cell lines. Conclusion and Significance: The findings suggested that calmodulin strongly involved in tumour cell growth and regulation in breast cancer. It can be useful therapeutic strategy for the treatment of breast cancer. This is preliminary finding, further sequencing for the exons that response strongly to the treatment is going on.

Biography

Dr Falah achieved his PhD in 1986 from University of Delhi in Medical Biochemistry and Molecular Biology. Since he was involved in teaching in medical schools, same time involved in research mainly on Molecular Bases of Cancer. His main field of experience in molecular Biology. Currently he is working as Professor of Molecular Biology in the Faculty of Medicine and Health Sciences, University Sabah Malaysia (UMS).

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Multidisciplinary patient navigation program improves compliance with adjuvant therapy

Maria Castaldi

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Cancer health disparities affecting low-income and minority patients have been well documented as leading to poor outcomes. This report examines the impact of patient navigation on adherence to prescribed adjuvant breast cancer treatment. A Multidisciplinary Patient Navigation Program was initiated at a public safety net hospital to improve compliance with three National Quality Forum (NQF) measures: 1) Administration of combination chemotherapy for women with Stage (defined by the American Joint Committee on Cancer, AJCC) T1c, II, or III hormone receptor negative (HRN) breast cancer within 120 days, and 2) Administration of endocrine therapy (HT) for women with AJCC Stage T1c, II, or III hormone receptor positive breast cancer (HRP) within 365 days. 3) Radiation therapy (xRT) for women receiving breast conserving surgery (BCS) within one year. Implementation of a multidisciplinary patient navigation program reduced time to treatment and improved compliance with adjuvant therapy for breast cancer in an underserved minority community.

Biography

Maria Castaldi currently working in the Albert Einstein College of Medicine, Bronx, graduated from Albert Einstein College of Medicine, Bronx, new York. Her research interest is Breast cancer.

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Mammographic Breast Density: Its role in tumor size assessment with imaging techniques

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Aim: To study the visual and automatic measurement of mammographic breast density (MBD) and its implications in tumor size assessment using distinct imaging techniques.

Methods: Study of the visual and automatic measurement of mammographic breast density according to the breast imaging data system (BI-RADS) in 212 patients with invasive unifocal breast cancer, excluding microinvasive lesions, who did not receive neoadjuvant chemotherapy. Tumor size assessment was compared using a linear regression according pathologic size with mammographic, US and MR size.

Results: Patient's mean age was 55,7±9.9 year-old. The mean size of the lesion established by: Mammography was 16.8± 10.4 (4 -70) mm, US was 13.6±7.2 (5 – 55) mm and MR 17.2 ±9.9 (5 – 66) mm. Mean pathologic size was 12.6 ±8.1 (0.3 – 55) mm. Automatic MBD mean was 25.2±16.78. BIRAD assessment with visual and automatic MBD measurements were correlated with a tendency of tumor size overestimation with visual method. BIRADS assessment according MBD established with visual or automated method. The best correlation was seen with MR although has a tendency to overestimate tumor size. Only tumor size assessed by mammography was influenced by MBD. With this technique, tumor size was best adjusted for those breasts with lower MBD.

Conclusion: Visual measurement overestimates MBD versus automatic measurement according BIRADS categories. MR is the more accurate breast imaging technique for assessing tumor size independently of the BMD which only influences in the mammographic tumor size estimation.

Biography

Maxim Izquierdo is an expert in the Breast Disease committee of Dexeus University Hospital, Barcelona. He has presented his news in the Gallen International BCC; European Breast Cancer Conference; ASCO; and World Congress of Senologic .International Society, He is member of Sociedad Española Senologia Patologia Mamaria.

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Young Research Forum



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The effect of progesterone administration on the expression of metastasis tumor antigens (MTA1 and MTA3) in placentas of normal and Dexamethasone-Treated rats

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University of Kuwait, Kuwait

Administration of Dexamethasone (DEX) induces intrauterine growth restriction (IUGR) in pregnant rats. IUGR can occur because of apoptosis of trophoblasts, which can be inhibited by progesterone administration. A group of genes called MTAs play a role in the proliferation and differentiation of trophoblasts. MTA1 upregulates their proliferation and differentiation, while MTA3 downregulates them. Hence, our hypothesis is that during IUGR, MTA1 expression decreases and MTA3 expression increases in the placenta and this is prevented by administering of progesterone. This study will investigate changes in placental protein content of MTA1 and MTA3 on 19 and 21 dg in the basal (BZ) and labyrinth (LZ) zones of normal, DEX-treated, and progesterone-treated placentas. Pregnant rats will be divided into 4 groups: control (V), DEX-treated (D), DEX- and progesterone-treated (DP) and progesterone-treated (P) groups. All groups will receive daily intraperitoneal injections starting from 15 dg. Animal dissection will be performed on 19 and 21 dg. Gene expression and protein content of both MTA1 and MTA3 will be studied in the BZ and LZ using Real-time PCR and Western blotting, respectively.

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Workshop



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Hands on – Contrast Enhanced Ultrasound (CEUS) technique for Carotid Artery Disease

Fatima Mohamad El Hajj

Analiamed Health and Wellness, Brazil

Doppler ultrasonography (US) is a non-invasive, low-cost method of screening carotid stenosis. With the incessant progress of diagnostic methods, Doppler ultrasonography (US) has proven to be a method of choice for non invasive evaluation of the carotid arteries.

CEUS technique – Contrast Enhanced Ultrasound is a modern feature to differentiation between carotid occlusion x subocclusion and identification of lesion neovascularization (unstable board markle).

Practice Workshop: hands on in CEUS technique for Carotid Artery Disease.

Biography

Fatima mohamad el hajj is a brazilian - lebanese vascular surgeon. She completed md in pontifical catholic university of sao paulo- pucsp and vascular surgery degree in iamspe. Currently a vascular surgeon at analiamed health and wellness and ceo of analiamed diagnose center.

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